



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Attorney Docket No. 11738.00079)

#18/C
CH 1/15/03
7200

In the Application of:)
)
Harper et al.) Group Art Unit: 3763
)
Serial No. 09/266,674) Examiner: K.Sirmons
)
Filed: March 11, 1999)
)
For: Hydrophobic Vent Incorporated Into)
Cerebral Spinal Fluid Drainage Chamber)

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TECHNOLOGY CENTER R3700

RESPONSE TO OFFICE ACTION MAILED 10/01/2002

Commissioner for Patents
Box Non-Fee Amendment
Washington, D.C. 20231

Dear Sir:

In response to the Office Action mailed October 1, 2002, please amend claims 1,
4, 23-30, 42-48, 59, and 66 as follows.

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1. A cerebral spinal fluid (CSF) drip chamber in a cerebral spinal fluid (CSF) drainage system comprising:
a cerebral spinal fluid containing tube, the tube having an outer surface; and
a vent in fluid communication with the tube, the vent having a filter made of expanded polytetrafluoroethylene (ePTFE), wherein the pore size of the filter ranges from greater than .45 μm ,
whereby underdrainage and overdrainage of cerebral spinal fluid from a patient, to the tube, may be controlled.

12 4. A cerebral spinal fluid (CSF) drip chamber in a cerebral spinal fluid (CSF) drainage system comprising:

a cerebral spinal fluid containing tube, having an outer surface; and,
a vent in fluid communication with the tube, the vent having a filter made of a hydrophobic porous material wherein the pore size of the filter ranges from greater than .45 μm to about 5.0 μm ,

whereby underdrainage and overdrainage of cerebral spinal fluid from a patient, to the tube, may be controlled.

13 23. A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

a fluid reservoir,
an outlet manifold in fluid communication with the fluid reservoir, the outlet manifold having an outlet,

an inlet manifold in fluid communication with the fluid reservoir, the inlet manifold having an inlet and an outer surface, the inlet manifold having a vent, the inlet manifold having an inside surface, the vent having a filter made of a porous material wherein the pore size of the filter ranges from greater than .45 μm to about 5.0 μm ;

a drainage bag; and
a stopcock connecting the drip chamber to the drainage bag through the outlet.

24. The drip chamber system of claim 23 wherein the pore size of the filter is about 3 μm .

25. The drip chamber system of claim 23 wherein the filter is made of expanded polytetrafluoroethylene (ePTFE).

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26. The drip chamber system of claim 23 wherein the porous material is a hydrophobic material.

27. The drip chamber system of claim 23 wherein the vent has a surface area ranging from about 0.8 cm^2 to about 5.0 cm^2 .

28. The drip chamber system of claim 23 wherein the filter is flush with the outer surface of the inlet manifold.

29. The drip chamber system of claim 28 wherein the vent is integral with the outer surface of the fluid reservoir.

30. The drip chamber system of claim 23 wherein the vent is integral with the outer surface of the fluid reservoir.

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42. The drip chamber system of claim 41 wherein the pore size of the filter is about $3 \mu\text{m}$.

43. The drip chamber system of claim 41 wherein the filter is made of expanded polytetrafluoroethylene (EPTFE).

44. The drip chamber system of claim 41 wherein the porous material is a hydrophobic material.

45. The drip chamber system of claim 41 wherein the vent has a surface area ranging from about 0.8 cm^2 to about 5.0 cm^2 .

46. The drip chamber system of claim 41 wherein the filter is flush with the outer surfaces of the inlet manifold.

47. The drip chamber system of claim 46 wherein the vent is integral with the outer surface of the fluid reservoir.